

1960

General Mills, Inc.
9200 Wayzata Boulevard
Minneapolis 26, Minn.

Fact Sheet on Balloon Flight for
GEOPHYSICS RESEARCH DIRECTORATE (ARDC), USAF

The General Mills two-mil polyethylene balloon for the August 29 flight was 360 feet long before inflation and has a diameter of 255 feet. It weighs 2,310 pounds alone. It was fabricated at the Mechanical Division's balloon manufacturing plant at 1801 University Avenue, St. Paul. Gross weight of the balloon and all equipment totals more than three tons and is the heaviest load ever carried to 100,000 feet by a balloon. It also represents the heaviest load ever launched by means of a dynamic launching technique.

To inflate the giant balloon, as tall as a 36-story building, 96,000 cubic feet of helium were required. At 100,000 feet, this quantity of lifting gas expanded to fill the 6.4 million cubic foot envelope to capacity.

The balloon system ascended at a pre-determined rate of 800 feet per minute, requiring two hours and five minutes to reach its altitude.

A 100-foot parachute with bright orange and white panels will lower the scientific payload back to earth.

Inflation, launching, tracking, and recovery of the system is being handled by a Balloon Operations crew of the Mechanical Division of General Mills. Project engineer for General Mills is Del Dietsche.

#

29
August, 1960

168A

GEOPHYSICS RESEARCH DIRECTORATE
AIR FORCE RESEARCH DIVISION (ARDC)
UNITED STATES AIR FORCE
LAURENCE G. HANSOM FIELD BEDFORD, MASSACHUSETTS

August, 1960

Research Brief

The Geophysics Research Directorate of the Air Force Research Division (ARDC) today launched a giant balloon from St. Cloud, Minnesota, which carried the heaviest scientific package yet sent to such a high altitude.

The balloon is expected to reach an altitude of eighteen to twenty miles, and to remain aloft for about twenty hours with its payload of 3,800 pounds. A high-volume air sampling instrument and 2,400 pounds of batteries to supply the power made up the scientific package.

The air sampler is especially designed to collect sub-micron size solid particles from the stratosphere. During the floating period at altitude, the sampler will pump more than 30,000 cubic feet of air, corresponding to 420 cubic feet of air under standard conditions. The operation is directed by Mr. Charles W. Chagnon. The scientific project is under the direction of Dr. Edward A. Martell and Dr. Marvin Kalkstein.

The 6.4 million cubic foot balloon was launched from St. Cloud, Minnesota, and the package is expected to be recovered near the Minnesota-South Dakota border after its descent by parachute. All field operations were performed by the Balloon Operations Section of General Mills, Inc., Minneapolis, Minnesota.

$\frac{H}{H^2}$ $\frac{H}{H^2}$ $\frac{H}{H^2}$ $\frac{H}{H^2}$ $\frac{H}{H^2}$

168B